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Examiner: SHAFER, RICKY D
Group A.U.: 2972

Remarks.

Claims 10-16, 19-20 appears to be rejected, in the Detailed, Final Action, dated 12/02/2004, under 35 USC § 112 for lack of enablement.

In particular, the Examiner deems that the specification, as originally filed, fails to provided adequate written description as to the "relationship between the radius of curvature R and the coordinates X , Y and Z , between the angular magnification M and the Z -coordinate and on the dependency of the curvature C , the shape S and correction A factors on the distance E and angular magnification M ", respectively.

It is respectfully submitted however that the disclosure as filed, in fact, would have fully enabled the claimed invention for one skilled in the art at the time of filing, for the reasons set forth hereinafter.

The specification need not disclose what is well-known to those skilled in the art and preferably omits that which is well-known to those skilled and already available to the public. In re Buchner, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987); and Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984).

The technological field to which the present invention pertains is that of the car mirror designing.

Thus, the one skilled in the art is an expert in the car mirror design and a specialist in the optical field. He would be knowledgeable of and have access to everything in the state of the art.

The relative skill of those in the art refers to the skill of those in the art in relation to the subject matter to which the claimed invention pertains at the time the application was filed. Where different arts are involved in the invention, the specification is

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enabling if it enables persons skilled in each art to carry out the aspect of the invention applicable to their specialty. In re Naquin, 398 F.2d 863, 866, 158 USPQ 317, 319 (CCPA 1968).

The "hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art." Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988)

Therefore the one skilled in the art of car mirror designing would be aware of the basics of the optical engineering and mathematics, such as disclosed in the Modern Optical Engineering- The Design of Optical Systems by Smith J Warren (second edition), McGraw-Hill, New York,(1990) or of the Eric Weisstein's World of Mathematics (mathworld.wolfram.com/OsculatingCircle)/ Eric W Weisstein © 1999 CRC Press L.L.C. and the references therein to Gray 1997 and Kreyszig 1991.

Such sources disclose facts well known in the technical pertinent field according to which C (see the equation $Z=...$ that characterizes an aspheric surface of rotation), i.e. the curvature factor (as defined/disclosed in the claims and description) depends on the curvature radius R, according to the well known relation $R=1/C$.

Thus the values of the curvature radius R (that has a point by point variation over the aspheric reflecting surface), contained in C, can be calculated, for the aspheric surface of the claimed/disclosed mirror surface, as the radius R of the osculating circle of a point of the aspherical curve where the reference conic selected as a hyperboloid tangentially overlaps on the aspherical curve.

Hence the values of R and the relationship between R and coordinates X, Y and Z are available and derivable, to the one skilled in the art, from the specification on the basis of the equation $Z=...$ and by virtue of the known relation $R=1/C$.

Further on, E being a car design factor selectable according to the car shape and dimensions, compatible values are readily derivable for R (see page 6, lines 2-12 and the plot of figure 6). Based on the relation between M and R given by the formula $M=...$ (page 5 of the specification and as claimed), the values for M are also derivable.

By a simple calculus and according to the plot of fig. 6 of the specification as filed, it is derivable, for example, that a range for R between 800 and 1200 mm, and in basis of values selected for E (such as approx. 50 cm-100cm), a range of approx. 0.375/0.4 to 0.55/0.64 is obtainable for M, which is a range according and in agreement to the provisions of the regulations applicable in the field.

Thereafter, the one skilled in the art, i.e. the expert mirror designer is able to derive, with the R (hence C) and the formula $Z=...$, such as by mere personal computer implementation, optimum corresponding values S and A, that are determined

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according to well known iteration-trial techniques- see Modern Optical Engineering- The Design of Optical Systems by Smith J Warren (second edition), McGraw-Hill, New York,(1990) with reference to the shape factor (in the application-S) and the correction factor (in the application -A).

It is believed that the above objective exemplification of a rationale based on the teachings of the application and the common general knowledge, available at the filing date of the application, which is within the normal skills and understanding capabilities of the person skilled in the art, clearly shows and beyond any doubt, the sufficient enabling level of the application disclosure.

In the applicant's view, the objective facts submitted above fully justify a reconsideration of the rejection of claims 10-17, 19 and 20 pending in the application and allowance thereof.

Accordingly, it is respectfully requested that the objective facts herein submitted be thoroughly assessed by the Examiner.

Following to the objections to the drawings under 37 CFR 1.83(a) requiring that , *"the drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation"*, Figures 1, 4 and 6 have been corrected.

In Fig. 1, the reference signs p and q, not mentioned in the specification, have been deleted without prejudice. The reference S' and h' have been correctly indicated as requested.

In Fig. 4 the origin O, axes X and Z and curvature C and distance E have been indicated consistent with the specification.

In Fig 6 the reference V has been changed to the correct M, in agreement with the specification and the indication of the very diagram (angular magnification).

No new matter has been introduced.

Thus, it is believed that all of the issues raised by objections regarding the non conformity of the drawings with the requirements of 37 CFR 1.81(a) have been properly dealt with.

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It will be noted that a sincere effort has been made to positively respond to all of the points raised by the Examiner.

Favorable action by allowance of the application is respectfully solicited.

While it is believed that the amended claims properly and clearly define the present invention, applicant would be open to any suggestion or amendment the Examiner may have or propose concerning different claim phraseology which, in the Examiner's opinion, more accurately defines the present invention.

Respectfully submitted,



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Figures 1 - 6 (Clean and Marked-Up Version)